

USDA-laboratory testing and interpretation protocol

As discussed in the last [edition](#) of StockQuotes, the Rapid Antigen Plate (RAP) test is no longer available nationally as a primary screening test for brucellosis. Also, in the last MDOL update (emailed November 18th), we described the increased number of suspect results we have seen with the use of the Fluorescent Polarization Antibody (FPA) test for screening. Initial validation of the FPA described a 99% specificity and sensitivity. With the use of the FPA for screening and confirmation, both Montana and Wyoming have utilized it on thousands of samples and have seen a sharp increase in low level suspect results compared to previous years.

Following the reports increase in numbers of suspect results with the use of the FPA as the screening test, USDA in partnership with the Greater Yellowstone Area States and state animal health officials from across the country created and approved the use of an interim testing protocol. The initial interim protocol incorporated an additional test for use on non-negative FPA samples to determine if an animal is negative, suspect, or a reactor.

The initial interim protocol utilized the Complement Fixation (CF) test in series. If the animal was suspect on FPA then the CF was performed. If the CF was negative, then the herd could be released from quarantine. Disposition and management of the individual animal depended on the initial value of the FPA test. Low value (11-20 mP) FPA animals were classified as negative and released. If the FPA value was at the high end of the suspect range (20-40), animals were classified as suspect and would be quarantined for further testing. By allowing the remainder of the herd to be released from quarantine, this protocol helped to minimize the impact on commerce. Unfortunately, it did not help to minimize the number of quarantined individual animals that were required to be retested.

The Montana Veterinary Diagnostic Laboratory ([MVDL](#)) began using the FPA for screening in mid-October. Since that time, MVDL has reported non-negative results on 55 animals. These 55 animals were in 34 different herds which resulted in some having to be placed under quarantine. While we believe that these herds are NOT brucellosis affected, the quarantines have caused concern, which is why we worked with USDA and other GYA states to develop the initial alternative testing and interpretation protocol. Through that protocol, too date, only two herds remain under quarantine. In fact, due to the alternative protocol some of these animals were determined to be negative quickly enough that quarantine was never necessary.

Despite the initial testing and interpretation protocol, the high number of suspects in Montana as well as Wyoming made it necessary to re-evaluate it to determine if changes should be made for improvement. With that in mind, the USDA reviewed and amended the protocol to include the Buffered Acidified Plate Antigen test (BAPA) in the series of tests. This second protocol is now being utilized and has allowed us to confidently release 16 animals as negative. Those 16 animals were previously required to be held by the producer for further testing. This most recent protocol created by the USDA was reviewed by the GYA states as well as the National Assembly of State Animal Health Officials (NASAHO).

We believe that this new protocol will further improve our ability to confirm negative animals that may be initially suspect on FPA. We understand there has been some concern over the higher number of suspect animals discovered this year. However, suspect animals have comprised only 0.13% of all animals tested, and quarantines have been released without disruption of scheduled animal shipments. It's important that veterinarians continue to encourage DSA producers to conduct a high rate of testing. Annual herd testing helps protect your clients by: a) minimizing the spread of disease within a herd through early discovery, b) shortening epidemiologic investigations, and c) potentially allowing producers to avoid quarantines during the grazing season. Additionally, collecting samples on a whole herd in the fall when animals are already being handled for pregnancy checking. For additional information contact Dr. Eric Liska, eliska@mt.gov.